NOCTI
Partner Credential Blueprint

FANUC

FANUC Certified Robot - Operator Instructor

Code: 9146 / Version: 01

General Assessment Information

Blueprint Contents

Test Type: The FANUC FCR-O1 national assessment is based on FANUC's industry recognized CERT Program, inclusive of FANUC's Robot Operations, HandlingPRO, HandlingTool Operations and Programming curriculums, Roboguide Simulation Software, and hands-on FANUC robot labs, provided by a FANUC certified academic instructor. Eligible participants can earn certification and an accompanying digital badge.

CIP Code

48.0501 - Machine Tool Technology/Machinist

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Science, Technology, Engineering & Mathematics

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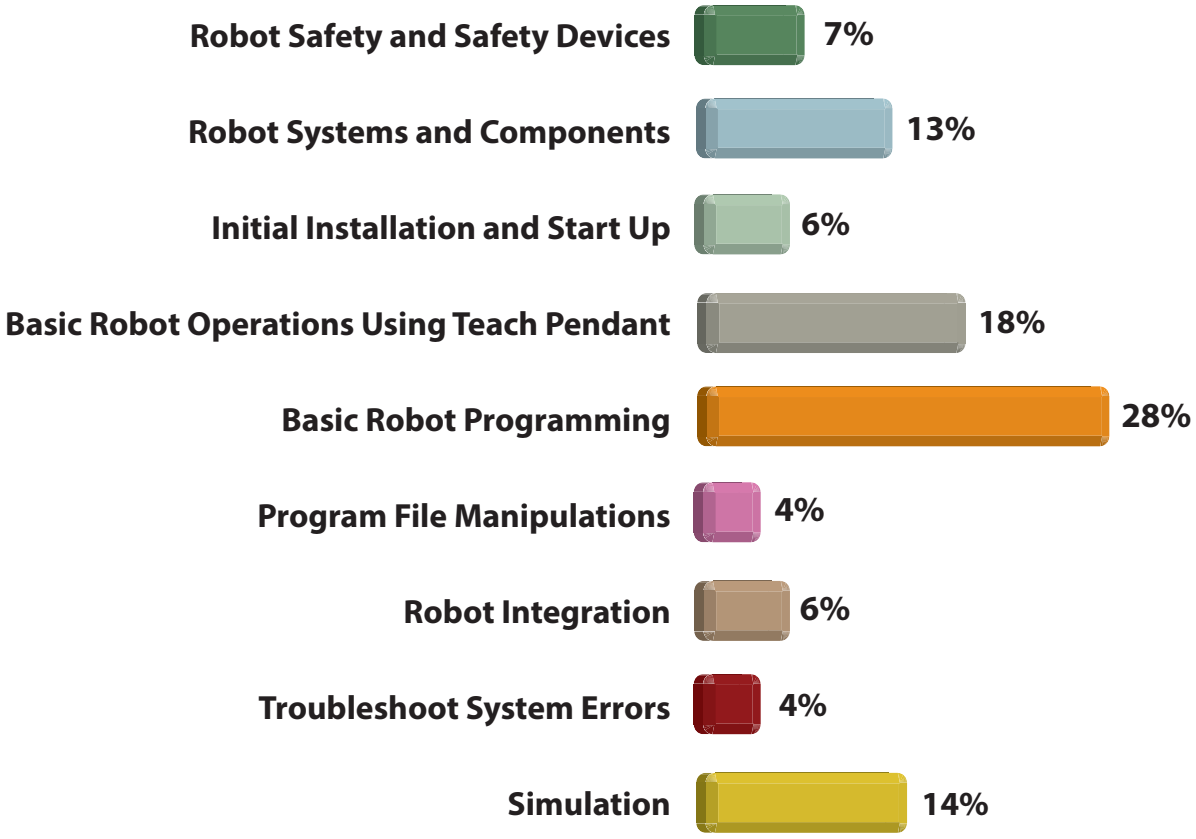
51-4011.00 Computer-Controlled Machine Tool Operators, Metal and Plastic

Written Assessment

Written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours
Number of Questions: 153
Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Robot Safety and Safety Devices

- Demonstrate knowledge of internal robot safety devices and functions
- Demonstrate knowledge of external safety devices

Robot Systems and Components

- Identify teach pendant features and functions
- Demonstrate knowledge of function of robot controller
- Demonstrate knowledge of function of end-of-arm tool (EOAT)
- Demonstrate knowledge of axis configuration and functions

Initial Installation and Start Up

- Prepare robot for installation and start up
- Determine and perform various start up methods
- Perform software setup

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Specific Standards and Competencies (continued)

Basic Robot Operations Using Teach Pendant

- Jog the robot using teach pendant
- Master and re-master robot
- Identify common keys in teach pendant
- Setup robot coordinate frames
- Identify basic error and fault recovery

Basic Robot Programming

- Create various robot programs
- Identify variables to include in motion program
- Plan a motion path
- Program inputs/outputs
- Program non-motion logic structures
- Program macros

Program File Manipulations

- Backup individual and system files
- Restore individual and system files
- Perform image backup and restore

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Specific Standards and Competencies (continued)

Robot Integration

- Establish communication to peripheral devices
- Configure input/output
- Set end-of-arm tool parameters

Troubleshoot System Errors

- Troubleshoot configuration errors
- Troubleshoot dual check safety (DCS) errors

Simulation

- Determine the function and use of simulations
- Demonstrate knowledge of simulation screen layout
- Prepare simulation model robot
- Jog the robot
- Define parts and fixtures in simulation
- Create robot TP program for simulation
- Create a simulation
- Execute simulation program
- Match real cell to Roboguide
- Transfer to and from robot

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Sample Questions

What are two ways to control the robots motion limits/boundaries?

A. Axis Limits and DCS Position Check
B. Axis Limits and Collision Guard
C. DCS Position Check and Safety Fence
D. Hard Stops and Safety Fence

What is the proper piece of equipment used to delete a program?

A. controller cabinet
B. teach pendant
C. manipulator
D. servo controller

Which start method allows you to install options and updates?

A. running start
B. blank start
C. cold start
D. controlled start

What key do you press to change the coordinates to jog into JOINT mode?

A. COORD Key
B. MENU
C. SELECT
D. NEXT

Which of the following hard keys would bring the menu item ABORT ALL to the TP Screen?

A. FCTN
B. HOLD
C. RESET
D. E-STOP

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Sample Questions (continued)

Within a program what combination of keys are used to touchup a position register?

A. SHIFT & F5 [TOUCHUP]
B. SHIFT & ENTER
C. SHIFT & DATA
D. SHIFT & F3 [TOUCHUP]

To restore a frame setting, which file would be used?

A. NUMREG.sv
B. FRAMEVAR.vr
C. POSREG.sv
D. DISFGSV.io

A series of inputs or outputs that the controller interprets as an integer number

A. Group I/O
B. User I/O
C. Analog I/O
D. Robot I/O

Simulations are used for all of the following <u>EXCEPT</u>

A. to analyze motion profile
B. to perform REACH and RANGE study
C. to develop appliations program
D. to generate bill material

In the Cell Browser, the named collection of targets when right clicked with the mouse has a menu option to change the motion parameters of the target collection. What is the name of this menu option?

A. EDIT TARGET GROUP
B. TARGET EDIT GROUP
C. GROUP EDIT TARGET
D. PROGRAM GROUP EDIT